VEER NARMAD SOUTH GUJARAT UNIVERSITY

University Campus, Udhna-Magdalla Road,
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M.Com. (Part- I) Statistics

ADVANCED STATISTICS PAPER III

(1) Mathematical Economics:

Concept of utility function and indifference curves, demandand compensated demand function, Production function, Formulation of a production function, Elasticity of substitution for two input factors of production, Cobb- Douglas production function, CES production function & methods of estimation of their parameters, Leontief's input-output static, open and closed models and its importance in inter- industry relations. (40%)

(2) Econometric methods:

The nature and role of econometrics, Introduction to econometric models:
(i) Single equation model, (ii) Simultaneous equations model.
Single equation model : Ordinary least squares model – Estimation of parameters, problem of multiocollinearity. Generalized least squares model – Estimation of parametrs (Aitken's estimator), Problem of heteroscedasticity and autocorrelation, methods of estimation in each case, grouping of observations and Durbin-Watson test.
Simultaneous equations models: Problem of identification : Statement and application of Rank and order conditions. Estimation of parameters of two equations by two-stage least squares method. (30%)

(3) Time Series Analysis:

Stationary time-series, 1st order Auto-regressive model & determination of dispersion matrix, Autocorrelation function, correlogram and periodogram analysis. (30%)

BOOKS :

(1) Allen, R. G. D. : (1973): Mathematical Analysis for economists.
(2) Box and Jenkins (1970): Time Series Analysis; Holden – Day Publications.
(3) Jaiswal, M. C. (1964): Artha Vishayak Ankadashashtra (in Gujarati); University Granth Nirman Board , Ahmedabad.
(4) Handerson, M. A. & Quandt (1980): Micro Economics Theory / Mathematical Economics, Mac-Graw Hills.
(5) Gujarati, D. (1979): Basic Econometrics; Mac-Graw Hills.
(6) Johnston, J. (1982): Econometric methods; Mac-Graw Hills and Kogakusha Ltd.